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Trichosporon Septicemia in Patients with Hematological Disorders

K. Suzuki^{1,*}, K. Nakase¹, T. Kyo², T. Shibasaki¹, Y. Katayama², K. Oka³, T. Tsukada⁴, N. Katayama¹

¹ Mie University Hospital, Tsu, Japan

² Hiroshima Red Cross Hospital, Hiroshima, Japan

³ Suzuka Kaisei Hospital, Suzuka, Japan

⁴ Takeuchi Hospital, Tsu, Japan

Invasive trichosporonosis is a rare fungal infection, but this disease has recently increasingly been recognized in patients with hematological disorders. However, little is known about the clinical characteristics of this infectious complication. We evaluated consecutive trichosporon septicemia in 20 patients with hematological disorders at the Mie University Hospital and related hospitals for 5 years between January 2003 and December 2007. All patients were male and age ranged 23–85 years (mean, 60.3). Underlying diseases are acute myelogenous leukemia (AML) in 18, macroglobulinemia in one and aplastic anemia in one. All had a neutrophil count $< 500/\mu\text{l}$ before the diagnosis of septicemia. Seventeen patients developed the sepsis after intensive chemotherapies, one during steroid treatment and two during observation. No patients examined had positive surveillance cultures for trichosporon. Nineteen patients showed breakthrough septicemia during the use of anti-fungal agents such as micafungin (MCFG) in 17, fluconazole (FLCZ) in 5, itraconazole in one and amphotericin-B (AMPH-B) in 3. Only 4 patients, who had an increase of neutrophil $> 500/\mu\text{l}$, recovered from this infection. Among them, two were treated with AMPH-B, FLCZ and miconazole, one with AMPH-B and FLCZ, and one with voriconazole only. We should pay attention to an occurrence of breakthrough trichosporonemia when we use MCFG as an empirical anti-fungal therapy for male patients with hematological disorders and neutropenia. We need to develop an effective strategy to treat this fungal infection because of rapid onset and high mortality.

doi:10.1016/j.ijid.2008.05.744

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Occurrence and Etiology of Fungal Rhino-Sinusitis in a New Delhi Teaching Hospital

A. Chowdhary^{1,*}, H.S. Randhawa¹, G. Khanna², A. Chakravarti³, S. Naglot³, P. Roy¹

¹ Department of Medical Mycology, Vallabhbhai Patel Chest Institute, University of Delhi, Delhi, India

² Department of Pathology, Vardhman Mahavir Medical College & Safdurjung Hospital, Delhi, India

³ Department of E.N.T, Lady Hardinge Medical College & Smt Sucheta Kriplani Hospital, New Delhi, India

Fungal rhinosinusitis is an increasingly important clinical entity with a world-wide distribution. However, there is paucity of information on its occurrence in Delhi and many other parts of India.

Aim: The study aimed at probing the occurrence and fungal etiology of rhino-sinusitis in Delhi area.

Methods: The study group comprised 50 patients with chronic rhinosinusitis (CRS) examined in the ENT Department, Lady Hardinge Medical College, New Delhi, during July 2006 to September 2007. Endoscopically removed sinus mucosa obtained from patients were investigated for fungal etiology in the Medical Mycology, V. P. Chest Institute, Delhi, by direct microscopy and fungal culture. One half of each specimen was fixed in formal saline for histopathologic examination and the other half processed for mycological investigations. Based on histopathologic observations, the specimens were categorized as follows: Group I comprised specimens showing presence of mucin infiltrated with hyphae suggestive of allergic fungal sinusitis (AFRS); Group II had fungal hyphae without mucin suggestive of fungal ball; Group III had mucin negative for fungal elements suggestive of eosinophilic mucin rhinosinusitis, and Group IV showing neither hyphae nor mucin indicating non-mycotic etiology.

Results: Fifty cases of CRS investigated, 23 (46%) had demonstrable fungal etiology. This included 13 cases (26%) classified as AFRS and 10 (20%) as fungal ball. Eight of the cases in AFRS group were confirmed by isolation of fungus in culture. *Aspergillus flavus* was the etiologic agent in 7 of these cases whereas it was *A. fumigatus* in a solitary case. In the fungal ball group, 7 cases were diagnosed by demonstration of fungus in histopathologic examination and 3 by direct microscopy of KOH mounts. Only 5 of the fungal ball cases were culture positive, the etiologic agent being *A. flavus* in 4 cases and an unidentified *Aspergillus* in a solitary case.

Conclusion: *Aspergillus flavus* is the predominant etiologic agent of fungal rhino-sinusitis in the Union Territory of Delhi. We believe that the disease is being under-diagnosed and under-reported in many parts of India due to inadequate awareness or lack of mycological diagnostic facilities.

doi:10.1016/j.ijid.2008.05.745

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Fluconazole Susceptibility and Genotypic Analysis of *Candida albicans* from Clinical Sources in Nairobi, Kenya

B.C. Chemutai^{1,*}, R.K. Korir¹, O.M. Mashedi¹, E. Gatumwa¹, M.C. Kangogo²

¹ Mycology Laboratory, Kenya Medical Research Institute, Nairobi, Kenya

² Department of Microbiology, Jomo Kenyatta University, Nairobi, Kenya

Background: The expanding population of HIV/AIDS has led to an increase in individuals at risk of contracting opportunistic fungal infection particularly Candidiasis. Studies have shown that there is a correlation between genotype and antifungal susceptibility in *Candida albicans*. While fluconazole resistance and unusual genotypic group of *Candida albicans* has been reported elsewhere, no genotypic studies have been conducted in Kenya.

Methods: We genotyped 92 *Candida* isolates from clinical sources and determined fluconazole susceptibility using procedures described in Clinical Laboratory Standard Institute (CLSI) M27-A2 document. The isolates were recovered from swabs (wound, mouth, HVS), urine, blood, aspirates and sputum specimens in opportunistic infection study in Nairobi, Kenya in 2006. Genotypic analyses were done with primers